

Learning Pronunciation of Chinese Surnames, Proper Salutations and Useful Greetings Using VoiceThread

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Abstract: As China rapidly expands its influence economically and politically in the world, there's a need for global citizens to acquire the basics of the Chinese language and culture. An online instructional module was created following instructional design principles to fill this need. The module teaches adult learners how to correctly pronounce ten commonly mispronounced Chinese surnames, proper salutations and useful greetings using VoiceThread. The module utilizes an integrated approach, multiple means of input and representation in a purposeful and practical manner to build interest and efficiency. Fifteen non-Chinese speaking adults took part in the one-hour module via distance. There was an average 156% increase in accuracy in pronunciation and content knowledge after completion of the module. The effectiveness of the module, areas for refinement and suggestions for future implementation and contribution to the field of language instruction are discussed.

Introduction

When former U.S. Secretary of State Henry M. Kissinger met China's leader Deng Xiaoping for the first time, Kissinger greeted Deng at the tarmac with a Chinese greeting "ni hao ma?" (how are you?) it immediately broke the ice and set the tone for that historical meeting. For world leaders, developing and honing multicultural competencies are critical.

Since that meeting, China has increased its GDP by tenfold. The Central Intelligence Agency World Factbook (2012) noted that China became the world's largest exporter in 2010 and in the same year also became the second-largest economy in the world after the U.S., having surpassed Japan in 2001. One year later, China also became the single largest foreign holder of United States Treasury debt.

The bilateral trade relation between the U.S. and China is also significant to note. While China exports vast quantities of products to the U.S., China is also the most important *importer* of U.S. goods. The U.S. Department of State (2012) accounts that in 2010 U.S. exports to China totaled \$91.9 billion and China is United States' largest agricultural export market.

International relations and monetary figures such as the ones mentioned can be complex to conceptualize. Examples from local economies, such as tourism, may be more graspable. The U.S. Department of Commerce reports that Chinese tourists spend on average \$7,200 dollars per person per trip, making them now the most sought-after tourists in the world (Yonan, 2010).

Hawaii, being one of the favorite tourist destinations for the Chinese, in year 2011 welcomed 91,000 tourists from China and gained \$60 million in revenue from this group of visitors alone (Agrusa, Kim & Wang, 2011). These figures will continue to rise sharply as direct flights are being added and tourist visas becoming easier to obtain. In addition, a World Journal article (Chen, 2012) reports that the Chinese are now the world's top consumers of luxury goods. Businesses are thus acting quickly, rechartering their practices, including employee training, to capitalize on this market trend.

Purpose of Project

Besides the tourists, there are Chinese from all walks of life, whether from China or from other Chinese speaking regions, who are meeting and living amongst their global counterparts all over the globe. As already mentioned, the numbers will continue to increase rapidly. The questions to ask are: *How can one, whether corporate businesses, world leaders or average citizens, prepare and become more culturally competent to meet and greet one another appropriately and properly? How can interested individuals acquire adequate language and cultural knowledge, albeit basic, in a convenient and time-conscious manner?*

A comprehensive survey of Chinese language lessons offered online yielded hundreds of courses. The researcher observed that most courses either catered children or adults. For individuals such as hotel front desk agents, who need language skills to better their job performance, they will have a difficult time finding instruction that is properly sequenced, concise and yet substantial enough that delivers just what is needed in an hour or two. Most courses are academic, requiring weeks, months or even years of commitment. They may also comprise a myriad of casual lessons or resources that aim to entertain or teach a wide range of topics and vocabulary words, often unrelated from one to the next. Unless specially designed, there remains a need for an effective and efficient instructional module that can systematically teach just what global citizens need to know. Thus this researcher designed such a module prototype to fill this void.

Module Development

The audience was first defined and analyzed. While everyone, including children, can learn and benefit from acquiring a foreign language, this instructional module was designed with the non-Chinese speaking working adults in mind. For example: hotel staff, customer service representatives, diplomats, politicians, physicians, nurses, teachers, students, and basically anyone who has a need or interest in acquiring such a skill for personal and professional reasons.

As shown in Table 1, an asynchronous distance learning model of different-time, different-place (DT-DP) was deemed most desirable for this module. Coldeway of Coldeway's Quadrants maintains this type of instruction is the "purest form" of distance learning (Simonson, Smaldino, Albright & Zvacek, 2008, p.10). With today's busy adults, accessing the module from anywhere in the world at any time via the Internet is a must. The Universal Design Guidelines (2008) encourages the use of multiple inputs and representation to allow different learner types, styles, and abilities equivalent access to information. For this module, auditory recordings, videos as well as text were used throughout the module. Keller's (1983) ARCS motivational model of attention, relevance, confidence, and satisfaction and Knowles' (1990) Principles of Adult

Learning laid the meaningful foundation for the module. These theorists stress, in brief terms, that unlike children, adults need to know purposefully why they are learning, take control of their learning, and apply what they learn in personal ways. Keller & Suzuki (2004) further contend that when success is expected, promoted and recognized, motivation will accelerate. Therefore, the relevance of the module was made clearly in the beginning of instruction. A positive sense of expectant success was conveyed through means of encouragement. This not only engages the audience's attention, but also motivates them throughout the learning process.

Table 1. Module design considerations implemented

Design Considerations	Principles & Tools Implemented
<ul style="list-style-type: none"> Distance learning Motivation for learning 	DT-DP (Coldeway, 1995) ARCS Model (Keller, 1987) Principles of Adult Learning (Knowles, 1990)
<ul style="list-style-type: none"> Multiple inputs & representation Instructional design (ID) hierarchy "Chunking" or clustering Instruction & feedback Scaffolding Integrate cultural knowledge Proper technology 	Universal Design Guidelines (UDL, 2008) Principles of ID (Dick & Carey, 1990) Distance Learning Principles (Landis, 2000) Gagne's Nine Events of Instruction (1992) Vygotsky (1978); Wood, Bruner & Ross (1976) Peck (1998) VoiceThread

The actual instructional sections of the module were created by adhering to the Dick and Carey Model of Instructional Design. After identifying the overall instructional goals, an instructional hierarchy chart was drawn to determine the skills non-speakers of Chinese would and would not possess. Three major performance objectives were identified: ten commonly mispronounced Chinese surnames, three forms of address or salutations and five useful greetings. The overall goal of the module is defined as: after the instruction, the learner should be able to pronounce the ten commonly mispronounced Chinese surnames taught within the module, apply the correct salutations or titles to the names in the correct order and use greetings as deemed socially appropriate with 80% accuracy using the reference sheet provided in the module. It is important to note the goal was not for learners to memorize everything, but with the aid of the reference sheet, learners should be able to produce what they need to say intelligently and intelligibly when necessary.

Eight short lessons were sequenced together to make up the entire module with each lesson, or chunk, taking between five to ten minutes to complete (Landis, 2000). The concept of scaffolding (Vygotsky 1978; Wood, Bruner & Ross, 1976) was used to ensure that new lessons were built upon learnt materials or what learners already know. Not only were new sounds built upon sounds previously introduced, salutations and greeting phrases were scaffolded as well. The scaffolds were removed at the end of each lesson for learners to evidence their learning in embedded tests.

The sequencing of the lessons deserves special mention. Instead of teaching each major performance objective separately and disconnectedly from one another, an integrated approach

was taken to weave and sequence the materials to allow information to be applied in meaningful contexts. For example, as learners learned a few surnames such as *Zhang* and *Xie* in Lessons 1.3 through 1.5, in Lesson 1.6, they were taught to apply them: “*Good morning, Mr. Zhang; Hello Ms. Xie.*” Sounds and phrases were recycled from lesson to lesson to maximize retention and application.

Gagne’s Nine Events of Instruction also guided the instructional design. Gagne identified nine mental events that occur when adults learn and suggest that these conditions be considered when designing instruction: gain attention, inform learner of objectives, stimulate recall of prior learning, present stimulus material, provide learner guidance, elicit performance, provide feedback, assess performance and enhance retention and transfer. The module follows Gagne’s guidance, particularly in the areas of providing examples, non-examples and learner feedback. For each lesson, ample illustrations were provided for learners to hear, see and discern. Recordings of correct sounds made by the researcher were provided after each embedded test as an integral part of the instruction.

The integration of culture was also a noteworthy aspect of the module design. In any language acquisition, learners must be shown how to use their newly gained language in culturally appropriate ways. “Culture should be our message to students and language our medium” (Peck, 1998). For example, it is not enough to know how to say “Mrs.” A short cultural tidbit about when *not* to use “Mrs.” in addressing Chinese women is crucial. An embedded link to a Times article about the next up-and-coming president of China helps learner to know who the man is in addition to knowing how to say his tricky surname, “Xi.”

After identifying all elements desired for this instruction, the appropriate technology to deliver the instruction was then chosen. Technology was chosen last because technology is to serve the needs of instruction and not the other way around (Simonson et al, 2008). The online slide show tool VoiceThread was selected as it offers the functionalities desired for the instruction. The module required about an hour to complete, with an option to pause and resume at any point to accommodate individual learning pace. The overall thematic and aesthetics for the module were also tailored to the adult learner.

Methods

With an upgraded subscription to VoiceThread, five duplicate copies of the same module were created, each with its own unique URL. Four to five participants were assigned to each copy for ease of data collection. Participants’ identities were kept confidential. Fifteen participants took part in the study, with most being educational technology graduate students and alumni from the College of Education at the University of Hawai’i. Participation was solicited via email using lists provided by the university. Initial contacts and consent information were also completed via email. All instructions thereafter were provided within the body of the module in VoiceThread. For instance, participants were instructed on how to answer all questions by making audio recordings of themselves using the Comment feature in VoiceThread.

Six content and cultural knowledge questions, ten Chinese surnames, eight greetings and forms of address phrases were asked of the participants in pre- and post-tests (Appendix A). A brief embedded test occurred after each of the eight lessons.

At the end of the module, participants answered an 18-question attitudinal survey supported by Google Docs (Appendix B). Feedback and narratives from the participants helped to assess the effectiveness of the module as well as provide suggestions for refinement in the future.

Scoring Pronunciation Improvement

The literature offers rating methods and scales by entities such as the Interagency Language Roundtable and the American Translator Association that grade a speaker's overall oral proficiency. These scales are suitable for testing speakers' prowess in using a particular language such as a French native's proficiency in all areas of his English speech-- in pronunciation, intonation, complex sentence structures, level of vocabulary register, word choice and so on. These scales are *not* suitable to rate pronunciation improvements for this study. Without an existent scoring system available, this researcher draws upon nearly two decades of professional interpretation, testing, and Chinese language teaching experience to construct a simple scoring system from zero to five to evaluate the level of participants' pronunciation accuracy in pre- and post tests (Appendix C). Each syllable received a score, for a total of 26 ratable syllables: ten syllables for surnames and sixteen syllables for greetings and salutations.

Results

Learning

Fifteen participants' pre- and post-test voice recordings were scored individually by the researcher. The average pre-test score was 30; the average post-test score was 77 (Figure 1). This represented an average 156% improvement in learning attributed to the instruction module. In the post-module survey, all participants agreed or strongly agreed that the module delivered what it intended to teach.

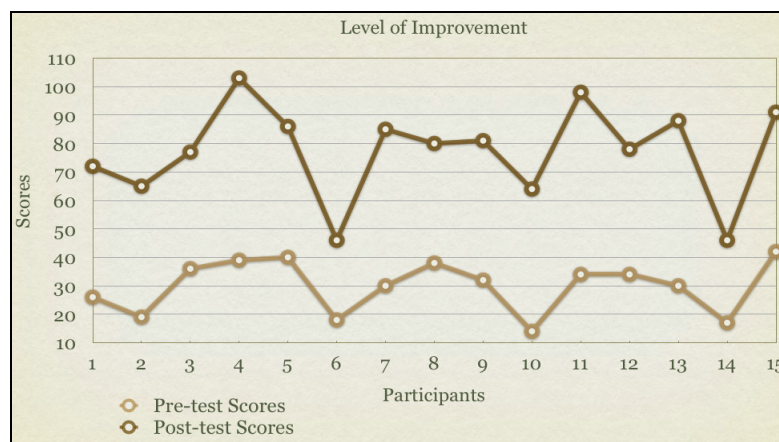


Figure 1. Pre- and post-tests pronunciation scores

Fourteen agreed that the examples and non-examples helped to illustrate the different sounds. Many found close-up videos very helpful in showing how teeth and lips should form to produce sounds and feedback recordings after the embedded tests. Most participants liked having

multiple means of representation: video, audio, as well as, text. They helped participants “*see, listen, remember and replicate the words.*” The printable reference guide was helpful to most, especially since it was designed in uniform with the module. One participant said, “*This uniformity kept me from having anything distracting like a new layout or background or imagery to focus on.*” Many liked the integrated approach and links for additional resources in the module. Another participant commented on how “*the module built upon each other - it scaffolded well.*” As for learning languages in general though, not all participants felt they were good at or liked learning languages. Only seven out of fifteen expressed strong interest and only four speak another language besides English. While almost all participants felt the subject matter was not an easy one to learn, most expressed that the module design was easy to follow.

Technology

Participants varied in their familiarity with VoiceThread prior to this learning experience. Six were very familiar with it and have created projects using the medium, four have only viewed others’ VoiceThreads, three have only heard of it, and two have never heard of it. There was one participant who didn’t finish, expressed that the technology was too novel for her.

The degree to which participants operated the module was not always what the researcher expected. For example, the researcher expected a new recording per each testing slide, but there were three participants who hit the recording button and in one recording, instead of four, covered all four pre-test slides. While the data was still fully collect-able this way, some participants deviated from the instructions. A couple of participants also reported sporadic technological glitches of VoiceThread, such as having to persistently hit the hyperlinks in order to open. There were also design imperfections such as using too light of a color for the doodler pen, or inconsistent alphabet representations for one sound.

However, even with imperfections and variance of familiarity with VoiceThread, in the end, twelve out of fifteen agreed or strongly agreed that VoiceThread was easy to navigate and fourteen felt it was a good tool to use to teach this module. Many commanded the video and auditory functions and the ability to voice record as a way to learn. The ability to stop and resume anytime in VoiceThread was also well used by many, as participants took breaks, sometimes for a day or two before resuming.

Return on Investment

Eleven participants took 60-90 minutes to complete the module, three took 90-120 minutes and one took approximately 60 minutes. While most felt the length of time invested was just right, a few felt the module was too long for one sitting, even though breaks were allowed at any time. These few participants noted the subject matter was not an easy one to grasp and learning languages was not their forte. Seven participants indicated strong interest in learning languages and for some of these individuals, they actually suggested more repetitions and slowing down instead of speeding up the instruction. Three wanted extra materials such as other difficult surnames and individual sound bites for each sound, “*so can go back to get more practice on each one.*”

Even with the variance in responses due to personal interests, most acknowledge the usefulness of the information presented and the time well spent for learning. Many indicated the usefulness of the printable reference guide not only for during the instruction but also for post instruction. One participant shared that she photocopied and passed the reference guide in her office to help others. Another remarked of her learning, *“I know I will be able to use what I learned today in my job as I work with clients from all nations and business from China is accelerating.”*

Discussion

The most important goal for this research was to produce an effective, time-efficient and stand-alone instructional module that is accessible any time, any where via Internet and delivers just what global citizens should know about greeting and addressing the Chinese. The encouraging results from this study indicate the module met the instructional goals.

While the results are favorable, there are certain areas that deserve discussion. Firstly, the participants for this study may not be representative of the general population. Over 90% of participants were graduate students in the Department of Educational Technology. This population is far more technologically advanced than the average citizen. This group was chosen to test the module prototype because of their experience in learning theories and instructional design; their input would be highly valuable to the researcher. On the flip side, their ease in using VoiceThread may not be representative of the general public's ability to use the tool. As mentioned in the results section, there was one participant who was not an educational technology student, and stopped because she did not know how to operate her microphone and manipulate the buttons for recording herself within VoiceThread. One other participant, also not a technology student, called for assistance with the technology. Even though the researcher had a tutorial in the beginning of the module on VoiceThread navigation, it was catered to just highlight the features unique to this module, not covering the very basics of VoiceThread. In the future, a separate optional tutorial on the basics or more in-depth explanations could be made for those who need it prior to starting the module. Allowing novice users to make mock recordings and familiarize features may be very helpful.

The “longness” of the module expressed by some participants deserves a closer look. The researcher believes learner interest in languages and the identified needs, or lack of, to study the subject matter are the underlying issues.

In any subject, one's aptitude and interest in the said subject matter affects one's learning. For the seven participants who indicated intrinsic interest in learning languages, they felt the length of the module was just right, noting especially that one could take breaks to take care of other life obligations and return when convenient. For those who did not particularly like languages, they tended to feel the module was long and completed the module in one sitting for fear they “may not come back.” Regardless of how participants felt about the length of the module, almost all suggested not cutting out materials presented. One suggested dividing the module into two.

It is important again to note the population solicited for this study. The intent was for the module prototype to be tested on a group of highly technical participants, trained in technology and in instructional design, so that the feedback received can be used to critically improve the

module. This population was indeed very helpful to volunteer and “help out” but were not necessarily all interested in the subject or have a perceived need to learn the subject. This again reminds one of the ARCS Model of Motivation. While the researcher reiterated the rationale of the module and the role of global citizenship, but until the learner felt the same way, the motivation to learn will not fully materialize. “Adults learn best when convinced that they need to know the information” (O’Brien, 2004). One participant stated a sentiment expressed also by a few others, *“If it was something I was seeking out because I needed or really wanted to learn, I think it would be just the right amount of time.”* Therefore, it would be highly important to test this module in the future on learners who have identified a personal need. Comparing to weeks, months, or years of institutional instruction, these individuals may find that an hour or two is in fact, short.

The suggestion to divide the module into two is an interesting one to contemplate on. Given that the module could already be stopped and resumed at any time, where would one break the module? It may be plausible to break it right after Lesson 1.5, before Forms of Address, but for a different and additional reason. The researcher, in the initial design, wished that a game could be implemented in the module; this may be a good place. After the first five short lessons, an interactive game could be played to serve as a solid review, a good mental and physical break and to build a stronger sense of achievement before beginning the second portion. But a needs assessment will need to be conducted to ascertain the necessity of this idea since the module has clearly demonstrated its effectiveness in its original form.

The scoring of pronunciation was graded by the researcher only. For better reliability and validity, future studies should have other raters grade for inter-rater reliability. It should be pointed out that the high percentage of improvement between pre- and post-test scores is not surprising. For instance, surnames such as “He”, “Xi” “Cai” were usually pronounced by participants as “he, zee and kai” which will not at all be recognizable to the average Chinese native. Through instruction, participants learned that these should be pronounced more closely as “huh, sheee, ts-eye,” markedly different; thus, the significant improvement in post-test scores.

The sample size for this module is small and selective. The study needs to be replicated with different populations in order to solidly claim its effectiveness. After refinement of the module, (e.g. correct small errors and inconsistencies, add a separate VoiceThread tutorial), the next population tested should be individuals who have a recognized need for this information, such as hotel agents and customer service representatives. Their feedback on the ease of the module navigation, length of module and real life application would be of high interest. An interview after a period of time using the information on the job, for example as hotel agents, would provide invaluable data to the true usefulness of the instruction.

Conclusion

China’s presence in today’s globalized world cannot be ignored. China has grown rapidly over the past two decades and continues to expand its influence politically, technologically, economically, and socially in the world. While individuals, scholars and academics may debate over China’s emergence, this researcher contends that as global citizens, much can be accomplished in the areas of multicultural competencies, understanding other cultures, and the ability to communicate, even if only at the most basic level.

This researcher recognizes a need in the marketplace for a simple and effective teaching module that does not require heavy commitments of learner time but teaches efficiently and sufficiently what average citizens should know. The module hones in on “trouble spots” of sounds that give English speakers the most difficulty. These troubling sounds occur in common interactions in meeting and greeting phrases in Chinese and titles of individuals. Thus the module teaches ten commonly mispronounced surnames and eight common forms of address and useful greetings.

The results from the study show highly favorable results, with 156% average improvement for fifteen volunteer participants. After finer adjustments to the module, the researcher recommends replicating the study on populations and individuals clearly identified as having a need to acquire this skill. Inter-rater reliability should also be implemented to better establish validity. The success of such an instructional module using VoiceThread can have broad implications in the field of language teaching. For the 21st century, learning is no longer confined within walls of the brick-and-mortar classroom. It is essential to be able to connect universally, use multiple means to engage the learner, provide authentic learning experiences within and beyond the learning community. In this study, in order to protect participant identities, participants only heard and saw the researcher in videos and auditory recordings. But in “real world” instruction, cohorts or learning communities can be created within each VoiceThread. Learners would be able to hear, watch and comment on each other’s learning instantly, teachers would be able to provide personalized feedback using multiple inputs to correct and to facilitate if so desired. Learners would also be able to contribute to the curriculum through their comments, discussions and discoveries. Selected native speakers could be invited to interact and provide authentic feedback. Interacting with natives can be very helpful because learners need to hear different voices, accents and demonstrate their skills. The level of engagement can be tailored to the needs of the learner and the goals of the course. This type of instruction strives to meet the current trend in education; that is, to meet the needs of all learners (Capper & Frattura, 2009).

On an even broader level, it could be said that modules such as this, made in other world languages, would help us all grow in multicultural competencies and global leadership. Although this paper does not focus on these topics, but becoming more competent in other cultures and languages could only assist understanding and building relationships between people. In the case of Henry M. Kissinger as mentioned in the beginning of the paper, a simple Chinese greeting of “ni hao ma” did more to bond the friendship with Deng Xiaoping than perhaps hundreds of state meetings. It may not be far-fetched to say those three little syllables changed the world.

Appendix A. Pre- & Post-Test Questions

Part I. Six content and cultural knowledge multiple choice questions:

1. *The current Romanization/alphabetical system that China uses to denote sounds of Chinese characters is called: _____*
2. *The current Romanized system was first intended to: _____*
3. *What is the official language of China today: _____*
4. *If you were Miss Mary Peterson, how would you say your name according to the proper Chinese name order?*
5. *The current president of China is Hu Jintao. Which is his middle name?*
6. *In the word “Yang,” which part of the word is the ‘final’?*

Part II. Pronunciation of ten commonly mispronounced surnames:

Xi, Xie, Zhang, Zeng, Cai, Wang, Xü, Qi, He and Zhu.

Part III. Pronunciation of eight greetings and salutations:

zao, zaijian, xiexie, xiaojie, xiansheng, nihao, bukeqi and nüshi.

Appendix B. Post-Module Survey Questions

7-pt. Likert scale questions:

- The rationale for the project is clear.
- The module as a whole delivers what it intends to teach.
- Given the complexity of the subject, the lessons were easy to follow.
- The pre and post test questions were appropriate to assess learning.
- The examples & non-examples explained concepts clearly.
- The integrated instructional approach was effective.
- The VoiceThread module was easy to navigate.
- VoiceThread was a good tool to use to teach this module via distance.
- The 1-pg reference guide was helpful.

Short answer and multiple choice questions:

- In general, do you like learning languages?
 - Do you speak another language besides English reasonably well?
 - Did you print out the reference guide as you went through the module?
 - How familiar were you with VoiceThread prior to this learning experience?
 - How much time did it take you to complete this module?
 - What is the ideal amount of time you would have liked to spend on this module? In other words, was the module too long? Too short? Just right? What would you cut out or add?
 - What did you like best about the module or the learning experience? What would you recommend to definitely keep?
 - What did you like least about the module or the learning experience? What would you suggest to change?
 - Additional comments and suggestions.
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Appendix C. Pronunciation Scoring System Devised

Score	Descriptions for rating of each syllable
0	Unintelligible to the rater. Pronunciation is less than 20% accurate. Sounds and phrases produced will not be understandable by the average Chinese native.
1	Barely intelligible to the rater. Pronunciation is about 20 - 40% accurate. Sounds and phrases will be mostly difficult for the average Chinese native to understand.
2	Understandable with effort on the part of the rater. Pronunciation is about 40%- 60% accurate. Sounds and phrases are more easily recognizable than level 1, but about half of which will still present problems for the average Chinese native to understand.
3	Intelligible to the rater. Pronunciation is about 60-75% accurate. Sounds and phrases can be recognizable and understandable by majority of Chinese natives.
4	Easily understood by the rater. Pronunciation is about 75% - 90% accurate. Sounds and phrases can be easily understood by nearly all Chinese natives.
5	Effortless to understand. Pronunciation is above 90% accuracy. Sounds and phrases sound can be understood by virtually all Chinese natives effortlessly.

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